

Title (en)  
DISPLAY DEVICE AND DISPLAY METHOD

Title (de)  
ANZEIGEVORRICHTUNG UND ANZEIGEVERFAHREN

Title (fr)  
DISPOSITIF ET PROCÉDÉ D’AFFICHAGE

Publication  
**EP 3410175 A4 20181205 (EN)**

Application  
**EP 17878397 A 20171003**

Priority  
• JP 2016236405 A 20161206  
• JP 2017035999 W 20171003

Abstract (en)  
[origin: EP3410175A1] A display apparatus (1) includes: a display surface (10) configured to display an image; and a concave mirror (11) configured to reflect light beams from the display surface (10) toward a transparent member (2) reflecting some of the light beams that have been input thereto and transmitting the remaining light beams that have been input thereto, in which a virtual image of the image is presented by the transparent member (2). An optical path after a first light beam (L1) is reflected in the transparent member (2) coincides with an optical path after a second light beam (L2) is reflected in the transparent member (2) by the reflection in the concave mirror, the first light beam (L1) reaching the transparent member (2) from one point on the display surface (10) and reflecting on a front surface (21) of the transparent member (2), and the second light beam (L2) reaching the transparent member (2) from the one point and reflecting on a rear surface (22) of the transparent member (2).

IPC 8 full level  
**G02B 27/01** (2006.01); **B60K 35/00** (2006.01); **B60R 11/02** (2006.01); **G02B 5/10** (2006.01); **G02B 27/00** (2006.01)

CPC (source: EP KR US)  
**B60K 35/00** (2013.01 - EP KR US); **B60K 35/23** (2024.01 - EP); **B60R 11/02** (2013.01 - EP KR US); **G01C 21/365** (2013.01 - KR); **G02B 5/10** (2013.01 - KR US); **G02B 27/0018** (2013.01 - KR); **G02B 27/0101** (2013.01 - EP KR US); **B60K 35/23** (2024.01 - US); **B60K 2360/23** (2024.01 - EP US); **B60K 2360/334** (2024.01 - EP US); **G01C 21/365** (2013.01 - US); **G02B 2027/012** (2013.01 - KR US); **G02B 2027/0121** (2013.01 - EP US)

Citation (search report)  
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• [YA] WO 2012036099 A1 20120322 - YAZAKI CORP [JP], et al  
• [Y] US 5504622 A 19960402 - OIKAWA KOHKI [JP], et al  
• [T] CN 206856500 U 20180109 - SHENZHEN QIANHAI ZHIYUNGU SCIENCE & TECH CO LTD  
• [T] CN 207752232 U 20180821 - SUZHOU CARROBOT AUTOMOTIVE ELECTRONICS TECH CO LTD  
• See references of WO 2018105214A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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**EP 3410175 A1 20181205; EP 3410175 A4 20181205; EP 3410175 B1 20191218**; CN 108496108 A 20180904; CN 108496108 B 20210514; EP 3677949 A1 20200708; EP 3677949 B1 20220216; JP 2018092050 A 20180614; JP 6365646 B2 20180801; KR 102215823 B1 20210215; KR 20190050736 A 20190513; US 10884242 B2 20210105; US 2019079286 A1 20190314; WO 2018105214 A1 20180614

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**EP 17878397 A 20171003**; CN 201780008010 A 20171003; EP 19205852 A 20171003; JP 2016236405 A 20161206; JP 2017035999 W 20171003; KR 20187021283 A 20171003; US 201816184819 A 20181108